

What is claimed is:

1. A composite material comprising:
a polyurethane gel including coarse-grain solid particles selected from the
5 group consisting of cork pieces, cork flour, wood pieces, wood chips, foam flakes,
textile fibers and textile pieces distributed therein.
2. The composite material according to claim 1 having a loss factor
greater than that of the polyurethane gel alone.
- 10 3. The composite material according to claim 1, wherein the effective
diameter of the coarse-grain solid particles is in a range between 0.1 mm to 15
mm.
- 15 4. The composite material according to claim 3, wherein the diameter
of the coarse-grain solid particles is in a range between 1 mm to 5 mm.
5. The composite material according to claim 1, wherein the coarse-
grain solid particles are in a range of between 5 to 90 percent of the composite
20 material's total volume.
6. The composite material according to claim 1, wherein the coarse-
grain solid particles are in a range of between 20 to 70 percent of the composite
material's total volume.
- 25 7. The composite material according to claim 1, wherein the
polyurethane gel includes compositions produced from materials wherein the
mathematical product of isocyanate functionality and functionality of the polyol
component is at least 5.
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8. The composite material according to claim 7, wherein the polyol component for producing the polyurethane gel includes of a mixture of one or more polyols having hydroxyl numbers below 112; and one or more polyols having hydroxyl numbers in the range 112 to 600, wherein the weight ratio of the one or more polyols having hydroxyl numbers below 112 to the one or more polyols having hydroxyl numbers in the range 112 to 600 is in a range of between 90:10 and 10:90.

9. The composite material according to claim 8, wherein the isocyanate characteristic of the reaction mixture lies in the range from 15 to 60.

10. The composite material according to claim 9, wherein the product of isocyanate functionality and functionality of the polyol component is at least 6.

11. The composite material according to claim 7, wherein the polyol component used in producing the polyurethane gel includes one or more polyols having a molecular weight (weight average) between 1,000 and 12,000 and an OH number in a range between 20 and 112, wherein the mathematical product of the functionalities of the polyurethane-forming components is at least 5.2 and the isocyanate characteristic is in a range between 15 and 60.

12. The composite material according to claim 7, wherein the isocyanates, used in producing the polyurethane gel, has a formula $Q(NCO)_n$, wherein n represents 2 to 4 and Q is selected from the group consisting of an aliphatic hydrocarbon radical having 6 to 18 C atoms, a cycloaliphatic hydrocarbon radical having 4 to 15 C atoms, an aromatic hydrocarbon radical having 6 to 15 C atoms or an araliphatic hydrocarbon radical having 8 to 15 C atoms.

13. The composite material according to claim 7, wherein the isocyanates are unmodified.

14. The composite material according to claim 7, wherein the isocyanates are urethanized.

15. The composite material according to claim 7, wherein the isocyanates are allophanatized.

16. The composite material according to claim 7, wherein the isocyanates are biuretized.

17. A molding made from a composite material comprising:
a polyurethane gel including coarse-grain solid particles distributed therein,
selected from the group consisting of cork pieces, cork flour, wood pieces, wood chips, foam flakes, textile fibers and textile pieces, wherein the effective diameter of the coarse-grain solid particles is in a range between 0.1 mm to 15 mm.

18. A composite material comprising:
a polyurethane gel including coarse-grain solid particles selected from the group consisting of cork pieces, cork flour, wood pieces, wood chips, foam flakes, textile fibers and textile pieces distributed therein, wherein the effective diameter of the coarse-grain solid particles is in a range between 0.1 mm to 15 mm utilized in a product selected from the group consisting of shoes uppers, shoe insoles, mattresses, seat supports, seat cushions and carpet back coatings.